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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,778	06/20/2005	Shigemasa Sato	124406	6484
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EXAMINER				
SCULLY, STEVEN M				
ART UNIT		PAPER NUMBER		
1795				
MAIL DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/539,778

Applicant(s)

SATO ET AL.

Examiner

Steven Scully

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-893)
Paper No(s)/Mail Date 07/12/2005

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

**ELECTRONIC DEVICE AND ELECTRONIC DEVICE OPERATING CONTROL
METHOD**

Examiner: Scully S.N.: 10/539,778 Art Unit: 1795 September 22, 2008

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-8, in the reply filed on August 13, 2008 is acknowledged. The traversal is on the ground(s) that once patentability is established, the fact that Groups I-VI each share a novel special technical feature will be confirmed. Further traversal grounds include that claims 1-17 are sufficiently related and would not present a serious burden in the search and examination of the claims. This is not found persuasive because the common technical feature of Groups I-IV has not been found to be inventive, as discussed in the Restriction requirement of July 14, 2008 and discussed below with regard to claim 1. Serious burden is not a basis for restriction of a national stage entry of an application filed under the Patent Cooperation Treaty and thus is not persuasive. See MPEP § 823.

The requirement is still deemed proper and is therefore made FINAL. Therefore, claims 9-17 are withdrawn from consideration.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 1-5 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meltser et al. (JP2000-067896, cited in IDS) in view of Watanabe (US2004/0067398) and Boehm et al. (US6,461,751).

Applicant appears to be invoking 35 U.S.C. 112, sixth paragraph, by using means-plus-function language. The 3-prong analysis of each means-plus-function claim limitation is met wherein a) "means for" language is used, b) the "means for" language is modified by functional language, and c) the phrase "means for" is not modified by sufficient structure, material, or acts for achieving the specified function.

With respect to claim 1, Meltser et al. disclose a fuel cell system comprising opt-isolators (14-20) (voltage detection means) for monitoring the voltage of the fuel cell. Further, a warning is issued when an abnormal condition occurs. When all fuel cells are operating normally, light emitters (22) emit light and thus display the voltage is satisfactorily high. See abstract.

Meltser et al. are silent with respect to a residual fuel amount detection means.

Watanabe discloses a hydrogen delivery system configured such that it has the functions of storing, displaying, and transmitting various kinds of information including the residual amount of a fuel gas. See paragraph 0018. It would have been obvious to one of ordinary skill in the art at the time of the invention to further monitor the residual fuel amount of Meltser et al. and display it on a display screen because Watanabe teaches detecting the flow-in amount and flow-out amount of the storage to thus detect the total amount of stored hydrogen and displaying the amount so that the electronic device user can monitor the remaining energy output of the device.

Meltser et al. and Watanabe et al. are silent with respect to an oxidizing agent concentration detection means.

Boehm et al. disclose a method and apparatus for operating a fuel cell wherein the oxidizing agent concentration of the oxidant stream is monitored so as to reduce parasitic power consumption, further comprising a warning signal to indicate that the oxidizing agent concentration is low. See Figure 4; Column 14, Line 36-Column 15, Line 6. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the fuel cell system of Meltser et al. with an oxidizing agent concentration monitoring system because Boehm et al. teach that it reduces parasitic power consumption.

With respect to claim 2, Meltser et al. teach when a voltage of the fuel cell is lowered below a start voltage of the light emitter, the related light emitter disappears, and the light emitters 22 emit light when operation is normal. See abstract.

With respect to claim 3, Watanabe discloses using a display to show the residual fuel left, which directly corresponds to the amount of time left on said fuel cell. It would have been obvious to one of ordinary skill in the art to display the monitored results instead of using an on/off light as taught by Watanabe because it would provide for more information on the system to be presented to the operator.

With respect to claim 4, Meltser et al. and Boehm et al. disclose judging the voltage and the oxidizing agent concentration of the fuel cell, respectively, and warning when either is below a predetermined value.

With respect to claim 5, Watanabe discloses displaying the residual fuel left. It would have been obvious to one of ordinary skill in the art to further display insufficient oxidizing agent concentration when the problem arises so the operator is notified.

5. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meltser et al. (JP2000-067896, cited in IDS), Watanabe (US2004/0067398) and Boehm et al. (US6,461,751) as applied to claims 1-5 above, and further in view of Miyamoto et al. (US6,002,888).

With respect to claim 6, Meltser et al. disclose displaying the remaining battery power of a camera on a display with a battery image 50 indicating the percentage of power remaining. See Figure 38. The image 50 is made to flash when the warning display for low battery charge is raised. See Column 28, Lines 6-10; Figure 38. It would have been obvious to one of ordinary skill in the art at the time of the invention to

cause the display to flash when the voltage is low so that the operator is more likely to notice the blinking of the indicators.

With respect to claims 7 and 8, it would have been obvious to one of ordinary skill in the art to cause the time left on the fuel cell indicator to flash when the residual fuel amount is low so the operator is more likely to notice.

Contact/Correspondence Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Scully whose telephone number is (571)270-5267. The examiner can normally be reached on Monday to Friday 7:30am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on (571)272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/S. S./

Examiner, Art Unit 1795

/Dah-Wei D. Yuan/

Supervisory Patent Examiner, Art Unit 1795